



EYEPiece TO INSTRUMENT COUPLER

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CLAIMS

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I claim and therefore seek protection secured by Letters of Patent for the following:

1. (Currently amended) A mechanical Coupler able to make and hold an optical connection between ~~some form~~ the Eyepiece of viewing device such as but not limited to telescopes, binoculars, microscopes, otto-scopes etc., to a camera or some other form of image recording device Instrument, that is complete requiring no other adapter or attachment. Said coupler ~~consists of~~ comprising:

(a) a clamping component or mechanism ~~that enables said Coupler to attach~~ attachable to said Eyepiece of a ~~scepe or other~~ viewing device.

(b) ~~(c)~~ a base bracket with provision for attachment to ~~the clamp~~ said clamping component by a supporting post, said base bracket and cut with a slot extended perpendicular to and from the said post- and through this which slot is inserted a tripod socket screw able to slide laterally up and down said base bracket to or from said post.

(c) ~~(b)~~ ~~an adjustable a post that supports and fixes the~~ connected in an adjustable, positionable manner to said clamping component ~~to a~~ on one end of the said post and said slotted base bracket on the other end of said post.

(d) a tripod socket screw with an undercut on the threads, ~~so that it may engage~~ engagable to the slot in the base bracket, ~~thread~~ threadable through the bracket and ~~then become free to slide~~ freely slidable up and down the length of the slot ~~Once threaded through the base bracket to the undercut area of the threaded, the tripod socket screw becomes free to engage, position and attach an Image recording instrument such as a digital camera, etc. and threadable into said Instrument.~~

(e) a jam nut or similar, positioned and releasably engaged upon said post to secure position between adjustable said post and said base bracket.

2. (Currently amended) An Eyepiece to Instrument Coupler according to claim 1, that is ~~complete, requiring no other adapter or attachment, to couple a viewing device to an image recording device or instrument. Said Coupler accomplishes this task by clamping onto eyepiece with a~~ has a conformable clamping mechanism roughly sized and shaped for that purpose and with the ability to be adjusted to fit. Said clamping component is in turn supported by an adjustable post and base bracket able to allow optical alignment with image recording instrument attached to said base bracket by means of to be attachable and positionable upon said Eyepiece of a viewing device, a base bracket with slot, attachable and positionable to said Instrument by a tripod socket screw, and an adjustable post attached positionably and perpendicularly between said clamping mechanism on one end and said Instrument on the other.

3. (Currently amended) An eyepiece to instrument Coupler according to claim 1, that has a clamping mechanism ~~that is~~ comprised of an outer containment band with a releasably diametrical reductive coaxial interior aperture roughly sized and shaped to allow fit over and clampable onto the barrel of an said Eyepiece, ~~to slip into, extend through, and shoulder up to the clamping mechanism's face. Once secured by adjustment, remaining portion of eyepiece is inserted into focuser with alternate face of clamping mechanism shouldered up against exterior face of focuser.~~ shortened in the axial direction to allow enough of said Eyepiece barrel to remain exposed for a securable fit into said viewing device.

4. (Currently amended) An eyepiece to instrument Coupler according to claim 1, that has a clamping mechanism ~~that is~~ comprised of an outer containment band with a releasably diametrical reductive coaxial interior aperture roughly sized and shaped to allow clamping fit over and clampable onto the eyepiece head of said Eyepiece or over the shroud of said Eyepiece that is non-removable, ~~eyepieces such as but not limited to Otto scopes.~~

5. (Currently amended) An eyepiece to instrument Coupler according to claim 1, that has a adjustable post attached to the and extending away along a perpendicular plane, from the coaxis of the interior aperture of said clamping mechanism ~~and allows said clamp to be positioned up and down from a~~ being securely and releasably positionable at a selectable distance from said base bracket ~~and independantly rotate about the axis connected perpendicularly to the opposite end of said post.~~

6. (Currently amended) ~~That the afore-mentioned post in~~ An eyepiece to instrument Coupler according to claim 5, can be positioned and hold aforementioned clamp and base bracket apart at any selectable distance by means of having said adjustable post with threads or stops and in such a way that distance and orientation is independantly repeatable and adjustable, allowing for moving of camera or machined into it or attached to it coaxially along said post's longitudinal axis, having said clamping mechanism and base bracket connected at alternate ends of said post with one, the other or both selectively held and positionably spaced apart, separation along the longitudinal axis of the post is repeatable and releasably held with independent orientation about the longitudinal axis of said post such that said ~~Instrument to the side and then returned is~~ movable away from said Eyepiece of viewing device and then returnable and releasably held without need for realignment.

7. (Currently amended) An eyepiece to instrument Coupler according to claim 1, that has a base bracket ~~that accomodates afore-mentioned vertical~~ releasably attached to and rotatable around the radial axis of said post that threads through said base bracket affecting both the attachment and positioning of aforementioned clamp to base bracket. ~~Said Base Bracket also has~~ and having a perpendicular slot extended radially away from said post, for a tripod socket screw that ~~engages, slides and rotates into position and affixes a camera-type~~ when fully engaged in said base bracket is freely engagable to said Instrument so that said Instrument thusly attached to the said base bracket. ~~Said base bracket allowing flexibility in positioning of all attachments, provideds for accurate by means of the tripod socket screw is releasably held to a~~ repeatable optical alignment between said Eyepiece of viewing device and image recording Instrument.

8. (New **) An eyepiece to instrument Coupler according to claim 1, that has a base bracket with an attachment point for said post, a base plane running perpendicular to said post, a vertical through slot extended radially away from said post, a tapped hole congruous to one end of said slot for a tripod socket screw that when fully engaged in said base bracket is retained, slidable, rotatable and freely engagable to said Instrument.

(**) See sepearte comment sheet.